WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: DC4061

Title: Speciation of Tributyltin and Triphenyltin Compounds in Clays from Sediments Using Mossbauer Spectroscopy

Focus Categories: Sediments, None

Keywords: Mossbauer spectroscopy, water pollution, sediments, clays, speciation, tripheyltin compounds, Tributyltin compounds

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: $15,573

Non-Federal Matching Funds: $15,349

Congressional District: DC

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Abstract

Triorganotin compounds were used as antifoulants in marine paints of which tributyltin and triphenyltin compounds still contribute to the problem of water quality in the waterways of this area. There are several marinas located in the District of Columbia and its environs. There is limited information on the speciation of these toxic compounds used in paint formulations in fresh and seawater in sediments found in the waterways.

The purpose of the proposed research is to determine the fate of Tributyltin and triphenyltin compounds in components of sediments. The results will provide the individuals interested in water quality with knowledge of fate of the tributyltin and triphenyltin compounds. During the grant period, the speciation of these compounds will be determined with clays found in the sediments from the Anacostia and Potomac Rivers. Knowledge of the products of such reactions would aid those who are making decisions concerning the problems of triorganotin compounds in the water system. For those studying the environmental impact on the life forms in the waterways, it would provide knowledge of the species of triorganotin compounds that may interact with the life forms being studied.